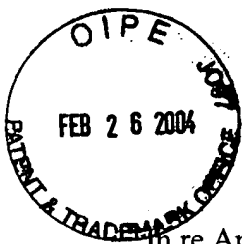


03500.013584.1

Image AF/1733
PATENT APPLICATION



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of:

MASAKI MIZUTANI, ET AL.

Application No.: 09/813,137

Filed: March 21, 2001

For: METHOD OF PRODUCING
SEMICONDUCTOR THIN
FILM AND METHOD OF
PRODUCING SOLAR CELL
USING SAME

)
:
Examiner: J. Goff, II

)
:
Group Art Unit: 1733

)
:
February 23, 2004

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

TRANSMITTAL OF BRIEF ON APPEAL

Sir:

Transmitted herewith, in triplicate, is a Brief On Appeal together with an Appendix A thereto in the above-identified application. The fee for filing the brief is \$320.00 pursuant to 37 C.F.R. §1.17(f). A check in that amount is enclosed.

I hereby certify that this correspondence is being deposited with the United States Postal Service as first-class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on February 23, 2004

(Date of Deposit)


George K. Ng, Reg. No. 54,334
(Name of Attorney for Applicant)

George K. Ng
Signature

February 23, 2004
Date of Signature

The Commissioner is hereby authorized to charge any required other fees,
and to credit any fees paid to Deposit Account No. 06-1205.

Respectfully submitted,



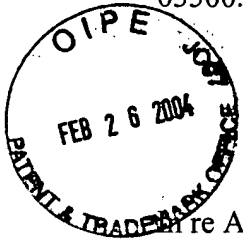
Attorney for Appellants
Registration No. 54,334

FITZPATRICK, CELLA, HARPER & SCINTO
30 Rockefeller Plaza
New York, New York 10112-2200
Facsimile: (212) 218-2200

CA_MAIN 76545v1

03500.013584.1

PATENT APPLICATION



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BOARD OF PATENT APPEALS AND INTERFERENCES

Re Application of:

MASAKI MIZUTANI, ET AL.

Application No.: 09/813,137

Filed: March 21, 2001

For: METHOD OF PRODUCING
SEMICONDUCTOR THIN
FILM AND METHOD OF
PRODUCING SOLAR CELL
USING SAME

Examiner: J. Goff, II

Group Art Unit: 1733

February 23, 2004

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

I hereby certify that this correspondence is being deposited with the
United States Postal Service as first-class mail in an envelope addressed
to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-
1450 on

February 23, 2004
(Date of Deposit)

03/01/2004 HVUONG1 00000116 061205 09813137
02 FC:1402 10.00 DA 320.00 OP

George K. Ng, Reg. No. 34,334

(Name of Attorney for Applicant)

George K. Ng
Signature

February 23, 2004
Date of Signature

APPELLANTS' BRIEF ON APPEAL

Sir:

This Brief is submitted in support of Appellants' appeal from the final rejection of Claims 19 and 30 in the above-identified application. A timely Notice of Appeal was filed with a Petition for extension of time on October 22, 2003. In compliance with 37 CFR § 1.17(c), submitted herewith is a check in payment of the \$320.00 brief fee. A separate Petition Under Rule 1.136(a) to extend the time for filing of this brief from December 22, 2003 to Monday, February 23, 2004 accompanies this Brief, together with the appropriate fee.

TABLE OF CONTENTS

Table of Contents	2
Table of Authorities	5
(1) Real Party in Interest	6
(2) Related Appeals And Interferences	6
(3) Status of The Claims	6
(4) Status of Amendments	7
(5) Summary of Invention	7
(6) Issues	10
(7) Grouping of Claims	10
(8) Argument	10
I. Given the procedural background of this divisional application, 35 U.S.C. § 121, third sentence, prohibits entry of an obviousness-type double patenting rejection over the now-issued claims of the '019 parent application.	10
A. In the parent '019 application, the Examiner required restriction between Claims 1 to 18 and 23 to 26, directed to a semiconductor thin film, which have now issued, and Claims 19 to 22 and 27 to 29, directed to a solar cell.	11
B. The present application is a divisional application for non-elected Claims 19 to 22 and 27 to 29.	11
C. The final rejection for obviousness-type double patenting over issued Claims 1, 3, 6 and 7 of the '666 patent is prohibited by 35 U.S.C. § 121, third sentence, for the reason that rejected Claims 19 and 30 are fully consonant with the restriction in the '019 parent application	12

1. 35 U.S.C. § 121, third sentence, prohibits an obviousness-type double patenting rejection in a divisional application that was filed as a result of a restriction requirement in the parent application, so long as the claims in the divisional application remain consonant with the restriction requirement. 13
2. Claim 19 is consonant because it was amended to include the language of original Claim 20, which was a part of Group II as formulated by the Examiner in the '019 parent application. 14
3. Claim 30 is consonant because it is drawn to a method of producing a solar cell, which is consistent with the basis for restriction in the '019 application, and because it includes the step of “rotating a thin film support member having a curved surface”, which is consistent with Claims 20, 22 and 28 of the Group II claims. 17
4. The Examiner is incorrect in contending that the pending claims, namely Claims 19 and 30, are no longer consonant, since his proposed theory that the claims have been amended to “require the primary basis of patentability of the [already patented claims]” finds no basis in either the law or fact. 18
5. Although the current Examiner contends that the original Examiner of the '019 application mistakenly categorized claims when entering the restriction requirement, such that the line of demarcation between the groups was unclear, such a mistake is precisely the kind of mistake against which Appellants are protected by 35 U.S.C. § 121, third sentence. 21

II. Even without the protection afforded by 35 U.S.C. § 121, third sentence, amended Claims 19 and 30 would not have been obvious from issued Claims 1, 3, 6 and 7 of the '666 patent in view of the Sakaguchi and Hamamoto patents, for the reason that the rejected claims are directed to a solar cell whereas the patented claims are directed to a semiconductor thin film.	24
A. In entering the restriction requirement, the Examiner in the '019 parent application explicitly conceded the distinctiveness of thin films used in solar cells and their utility in other devices, such as TFTs, CMOS, etc.	25
B. Because the existence of semiconductor thin films does not necessarily imply the solar cells of the rejected claims, the obviousness-type double patenting rejection is erroneous and must be withdrawn.	25
Conclusion	27
Appendix A	28

TABLE OF AUTHORITIES

Cases

<u>Texas Instruments Inc. v. U.S. International Trade Commission</u> , 988 F.2d 1165, 26 USPQ2d 1018, (Fed Cir. 1993)	19
<u>Applied Materials Inc. v. Advanced Semiconductor Materials America, Inc.</u> , 98 F.3d 1563, 40 USPQ2d 1481 (Fed. Cir. 1996)	19
<u>Ex parte Nantz</u> , 141 USPQ 523 (Bd. App. 1963)	22

Statutes/Rules

35 U.S.C. § 121	17
35 U.S.C. § 121, third sentence	13
M.P.E.P. § 608.01	16
M.P.E.P. § 804.01	13, 24
M.P.E.P. § 804.01(b)	13
M.P.E.P. § 806.05(c)	11

Other

Federico Affidavit, Dkt. 53A	22
------------------------------	----

(1) REAL PARTY IN INTEREST

The real party in interest herein is the assignee in the present application, Canon Kabushiki Kaisha, a corporation of Japan having a place of business at 30-2 Shimomaruko 3 -chome, Ohta-ku, Tokyo, Japan.

(2) RELATED APPEALS AND INTERFERENCES

Appellants, Appellants' legal representative, and the Assignee are not aware of any other related appeals or interferences which will directly affect, be directly affected by, or have a bearing on the Board's decision in the instant appeal.

(3) STATUS OF CLAIMS

Claims 19, 21, 27, 29 and 30 remain pending in the application. Only Claims 19 and 30 have been examined on the merits, with Claims 21, 27 and 29 being withdrawn from consideration pursuant to an election of species requirement. In the event that allowable subject matter is found, Appellants respectfully request that Claims 21, 27 and 29 be rejoined under M.P.E.P. § 821.04.

Claims 19 and 30 have been finally rejected for obvious-type double patenting over issued Claims 1, 3, 6 and 7 of U.S. Patent No. 6,258,666 (hereinafter "Mizutani '666", the "'666 patent" or the "parent patent") in view of U.S. Patent No. 6,100,166 (hereinafter "Sakaguchi") and U.S. Patent No. 5,397,713 (hereinafter "Hamamoto"). Mizutani '666 issued from U.S. Application No. 09/333,019 (hereinafter "the '019 application" or "the parent application"). The subject application is a division of

the '019 application, and was filed in response to a restriction requirement in the parent application.

(4) STATUS OF AMENDMENTS

All amendments to the claims have been entered, and the language of the claims is therefore identical to that set forth in the Amendment dated February 4, 2003, which was entered in the Office Action dated April 22, 2003. In addition, a copy of the claims involved in the appeal is provided in the attached Appendix A.

(5) SUMMARY OF INVENTION

Appellants' invention, as recited by amended Claim 19, concerns a method of producing a solar cell which includes the steps of: forming a separation layer on a substrate and forming a semiconductor thin film having a semiconductor layer of a first conductivity type and a semiconductor layer of a second conductivity type on the separation layer, bonding a flexible film onto the semiconductor thin film with an adhesive, securing an edge of the flexible film extending outwardly from the substrate to a thin film support member having a curved surface, rotating the thin film support member while the flexible film is kept in contact with the curved surface of the thin film support member, thereby peeling the semiconductor thin film away from the substrate, and forming an electrode on a back surface of the semiconductor thin film thus peeled.

Meanwhile, Appellants' invention, as defined by Claim 30, concerns a method of producing a solar cell, which includes the steps of: forming a separation layer on a substrate and forming a semiconductor thin film on the separation layer, bonding a

flexible film onto the semiconductor thin film with an adhesive, securing an edge of the flexible film extending outwardly from the substrate to a thin film support member having a curved surface, rotating the thin film support member while the flexible film is kept in contact with the curved surface of the thin film support member, thereby peeling the semiconductor thin film away from the substrate, and the step of forming an electrode, or another semiconductor thin film and an electrode on a back surface of the semiconductor thin film thus peeled.

Thus, as shown in terms of one representative embodiment of the invention at Figure 9, reproduced below, the invention generally involves a method of producing a solar cell. In the method, a separation layer 16 is first formed on a substrate 1. Second, a semiconductor thin film 2 is formed on the separation layer 16. Then, a flexible thin film 4 is bonded to the semiconductor thin film 2 with an adhesive. As shown in Figure 9, the flexible thin film 4 extends outward from the substrate 1. Next, the semiconductor thin film 2 is peeled away from the substrate 1. Finally, an electrode 15 is formed on the back surface of the peeled semiconductor thin film 2.

FIG. 9

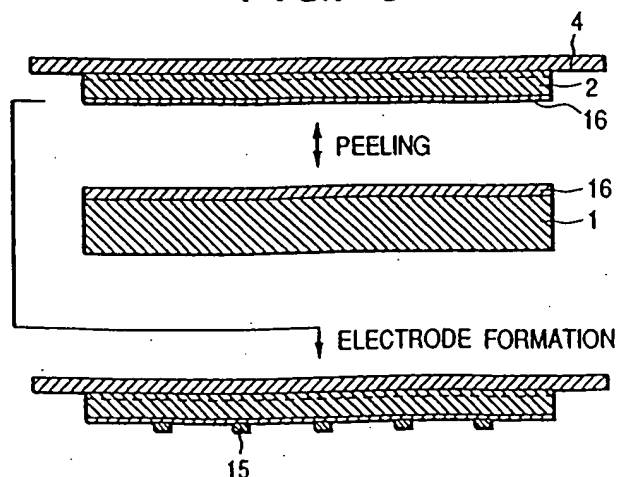
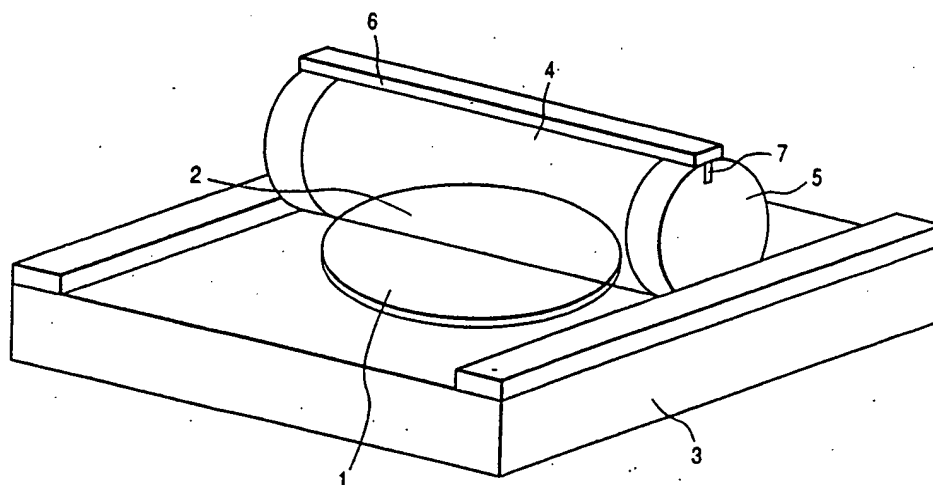


Figure 1, reproduced below, further clarifies the foregoing peeling step. In the peeling step, the edge of the flexible thin film 4 that extends outward from the substrate is secured on a thin film support member 5, which has a curved surface. Then, while keeping the flexible thin film 4 in contact with the curved surface of the thin film support member 5, the thin film support member 5 is rotated so that the semiconductor thin film 2 is peeled from the substrate 1.

FIG. 1



The method of forming a semiconductor thin film, *per se*, is the subject of the issued claims of the '666 patent. As shown above, rejected Claims 19 and 30 of the instant application are directed to a method for forming a solar cell, and therefore include additional steps such as bonding of a flexible film onto the semiconductor thin film, and formation of an electrode on the back of the semiconductor thin film.

(6) ISSUES

The issues presented in this appeal are:

1. Whether the obviousness-type double patenting rejection can be sustained given the prohibition against such a rejection in 35 U.S.C. § 121, third sentence, in this situation where amended Claims 19 and 30 of this divisional application are fully consonant with the restriction requirement in the parent application; and

2. Whether the obviousness-type double patenting rejection can be sustained in this situation where amended Claims 19 and 30 recite subject matter directed to a solar cell which would not have been obvious over issued Claims 1, 3, 6 and 7 of the parent patent, which are all directed to a semiconductor thin film.

(7) GROUPING OF CLAIMS

Claims 19 and 30 rise and fall separately. Even though these two claims have been rejected by the same references under the same judicially created doctrine of obviousness-type double patenting, Appellants rely on different reasoning that applies uniquely to each claim to support their consonance with the restriction requirement in the parent application.

(8) ARGUMENT

- I. Given the procedural background of this divisional application, 35 U.S.C. § 121, third sentence, prohibits entry of an obviousness-type double patenting rejection over the now issued claims of the '019 parent application

As addressed below, in light of the procedural history and facts in this situation, 35 U.S.C. § 121, third sentence, prohibits the outstanding obviousness-type

double patenting rejection of present Claims 19 and 30 over issued Claims 1, 3, 6 and 7 of the parent '666 patent.

- A. In the parent '019 application, the Examiner required restriction between Claims 1 to 18 and 23 to 26, directed to a semiconductor thin film, which have now issued, and Claims 19 to 22 and 27 to 29, directed to a solar cell.
-

In parent Application No. 09/333,019, now the '666 patent, restriction was imposed between the claims of Group I, namely Claims 1 to 18 and 23 to 26, which were drawn to a method of producing a semiconductor thin film, classified in class 438, subclass 71, and the claims of Group II, namely Claims 19 to 22 and 27 to 29, which were drawn to a method of producing a solar cell, classified in class 136, subclass 243.

The restriction requirement (included in the Notice Of Allowance dated December 18, 2000) was entered pursuant to the guidelines of M.P.E.P. § 806.05(c), which permits restriction between a combination and sub-combination if it can be shown that the combination does not require the particulars of the sub-combination for patentability and that the sub-combination has separate utility. In entering the restriction, the Examiner stated that the thin films of the Group I claims were not necessarily limited for use in solar cells, but rather possessed "separate utility such as the semiconductor thin films can be used in numerous other devices line [sic, like] TFTs, CMOS, Etc."

- B. The present application is a divisional application for non-elected Claims 19 to 22 and 27 to 29.
-

In response to the restriction requirement, Group I was elected, without prejudice to filing a divisional application for the non-elected group. As a result of the restriction requirement, the present divisional application was filed on March 21, 2001 to

seek patent protection, *inter alia*, for the subject matter of non-elected Group II. Claims directed to Group I subsequently issued in the '666 parent patent on July 10, 2001.

In the divisional application, pursuant to an additional election of species requirement entered in the Office Action dated August 1, 2002, Claims 21, 27 and 29 were withdrawn. Claim 30 was newly added in the Response To Election Of Species Requirement And Amendment dated September 3, 2002. Subsequently, in the Amendment dated February 4, 2003, responsive to an art-based rejection¹ entered in the Office Action dated November 4, 2002, dependent Claims 20, 22 and 28 were cancelled and the substance of Claim 20 was incorporated into independent Claims 19 and 30.² In response, the Office Action dated April 22, 2003, withdrew its art-based rejection and entered a new rejection of present Claims 19 and 30 for obviousness-type double patenting over Claims 1, 3, 6 and 7 of the '666 patent in view of U.S. Patent No. 6,100,166 (Sakaguchi) and U.S. Patent No. 5,397,713 (Hamamoto).

- C. The final rejection for obviousness-type double patenting over issued Claims 1, 3, 6 and 7 of the '666 patent is prohibited by 35 U.S.C. § 121, third sentence, for the reason that rejected Claims 19 and 30 are fully consonant with the restriction requirement in the '019 parent application.
-

As explained below, present Claims 19 and 30, which are claims in a divisional application that was filed as a result of a restriction requirement in a parent application, are fully consonant with the restriction requirement imposed in the parent '019 application. For this reason, the outstanding obviousness-type double patenting

¹The art-based rejection is not an issue in this appeal.

²Actually, the language of all of Claims 20, 22 and 28 is nearly identical to each other.

rejection of present Claims 19 and 30 over issued Claims 1, 3, 6 and 7 of the '666 patent is prohibited by 35 U.S.C. § 121, third sentence.

1. 35 U.S.C. § 121, third sentence, prohibits an obviousness-type double patenting rejection in a divisional application that was filed as a result of a restriction requirement in the parent application, so long as the claims in the divisional application remain consonant with the restriction requirement.

35 U.S.C. § 121, third sentence, provides:

“A patent issuing on an application with respect to which a requirement for restriction under this section has been made, or on an application filed as a result of such a requirement, shall not be used as a reference either in the Patent and Trademark Office or in the courts against a divisional application or against the original application or any patent issued on either of them, if the divisional application is filed before the issuance of the patent on the other application.”

In further clarification of the foregoing statute, M.P.E.P. § 804.01, in pertinent part, states:

“The prohibition against holdings of double patenting applies to requirements for restriction between the related subjects treated in M.P.E.P. 806.04 through 806.05(i). . . , so long as the claims in each case are filed as a result of such requirement. . . The following are situations where the prohibition of double patenting rejection under 35 U.S.C.121 does not apply: . . .(B) The claims of the different applications or patents are not consonant with the restriction requirement made by the examiner, since the claims have been changed in material respects from the claims at the time the requirement was made. For example, the divisional application filed includes additional claims not consonant in scope to the original claims subject to restriction in the parent. In order for consonance to exist, the line of demarcation between the independent and distinct inventions identified by the examiner in the requirement for restriction must be maintained.” (citations omitted).

In short, 35 U.S.C. § 121, third sentence, prohibits an obviousness-type double patenting rejection in a divisional application that was filed as a result of a

restriction requirement in the parent application, so long as the claims in the divisional application remain consonant with the restriction requirement.

As explained above, the divisional application was filed to prosecute the non-elected Group II claims. As such, the divisional application was filed as result of the restriction requirement imposed in the parent application. Therefore, 35 U.S.C. § 121, third sentence, prohibits the obviousness-type double patenting rejection in this instance so long as the claims in the divisional application remain consonant with the Restriction Requirement in the parent application.

2. Claim 19 is consonant because it was amended to include the language of original Claim 20, which was a part of Group II as formulated by the Examiner in the '019 parent application.

The Amendment dated February 5, 2003 cancelled dependent Claims 20, 22 and 28, which were all claims in non-elected Group II of the parent. In addition, independent Claim 19 was amended to incorporate a feature in cancelled Claims 20, 22 and 28. Specifically, this feature is the step of rotating a thin film support member having a curved surface. Since this feature was present in Claims 20, 22 and 28 at the time of restriction, it was also included with Group II at the time of restriction.

The following Table 1 shows present Claim 19 as compared to original Claims 19 and 20.

Table 1.

<u>Present Claim 19</u>	<u>Original Claims 19 and 20</u>
<p>19. A method of producing a solar cell, comprising:</p> <p style="padding-left: 40px;">the step of forming a separation layer on a substrate and forming a semiconductor thin film having a semiconductor layer of a first conductivity type and a semiconductor layer of a second conductivity type on the separation layer;</p> <p style="padding-left: 40px;">the step of bonding a light-transmitting flexible film onto the semiconductor thin film with a light-transmitting adhesive;</p> <p style="padding-left: 40px;">the step of securing an edge of the flexible film extending outwardly from the substrate to a thin film support member having a curved surface;</p> <p style="padding-left: 40px;">the step of rotating the thin film support member while the flexible film is kept in contact with the curved surface of the thin film support member, thereby peeling the semiconductor thin film away from the substrate; and</p> <p style="padding-left: 40px;">the step of forming an electrode on a back surface of the semiconductor thin film thus peeled.</p>	<p>19. A method of producing a solar cell, comprising</p> <p style="padding-left: 40px;">the step of forming a separation layer on a substrate and forming a semiconductor thin film having a semiconductor layer of a first conductivity type and a semiconductor layer of a second conductivity type on the separation layer,</p> <p style="padding-left: 40px;">the step of bonding a light-transmitting film onto the semiconductor thin film with a light-transmitting adhesive,</p> <p style="padding-left: 40px;">the step of exerting an external force on the light-transmitting film and thereby peeling the semiconductor thin film away from the substrate, and</p> <p style="padding-left: 40px;">the step of forming an electrode on a back surface of the semiconductor thin film thus peeled.</p>
	<p>20. The method according to Claim 19, wherein the peeling is carried out by rotating a thin film support member having a curved surface while supporting the light-transmitting film on the curved surface of the thin film support member.</p>

Appellants are aware that there are some instances when amendments might result in the crossing of the line of demarcation or noncompliance with the consonance requirement. However, Appellants fail to see how the foregoing Amendment could possibly result in noncompliance when it neither added new features nor altered existing ones. The amendment at issue involved a feature in the present application that was already present in the non-elected group of claims in the parent application at the time of restriction. Merely incorporating such a feature of one claim into another does not result in the amended claims being noncompliant or non-consonant to the restriction requirement. Such an amendment neither expands the scope of the present claims beyond the non-elected claims of Group II, nor alters the present claims in a material way since the existing feature at issue was merely rewritten in independent form.

In addition, the M.P.E.P. confirms long-standing hornbook law that a dependent claim like Claim 20 is merely shorthand format for an independent claim, and does not differ in substance from a claim written in independent form. Specifically, M.P.E.P. § 608.01 advises:

“Examiners are reminded that a dependent claim is directed to a combination including everything recited in the base claim and what is recited in the dependent claim. It is this combination that must be compared to the prior art, exactly as if it were presented *as one independent claim.*” (emphasis added).

In keeping with this view, there is no substantive difference between original dependent Claim 20 and amended Claim 19, which incorporates the features of cancelled Claim 20. Consequently, the incorporation of the features of a dependent claim into an independent claim within a group of claims does not alter the group materially or

expand the scope of the group. As such, amended Claim 19 remains consonant with the Restriction Requirement in the parent application.

In addition, in the Office Action dated August 1, 2002, the present Examiner grouped Claims 19 and 20 together in an election of species requirement. Appellants view this act as an implicit acknowledgment by the present Examiner that Claims 19 and 20 belong in the same group of claims. In accordance with the present Examiner's apparent view, the cancellation of Claim 20 and incorporation of its contents into Claim 19 would not cross the line of demarcation set in the restriction requirement in the parent application.

3. Claim 30 is consonant because it is drawn to a method of producing a solar cell, which is consistent with the basis for restriction in the '019 application, and because it includes the step of "rotating a thin film support member having a curved surface", which is consistent with Claims 20, 22 and 28 of the Group II claims.

Like present Claim 19, amended Claim 30 is also drawn to a method of producing a solar cell, which is consistent with the basis of restriction articulated by the Examiner in the '019 parent application:

"Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-18 and 23-26, are drawn to a method of [producing a] semiconductor thin film, classified in class 438, subclass 71.
- II. Claims 19-22 and 27-29, are drawn to a method of producing a solar cell, classified in class 136, subclass 243." (Notice Of Allowance dated December 18, 2000, page 2, in parent '019 application).

In this regard, Group I (Claims 1 to 18 and 23 to 26) was drawn to a method of producing a semiconductor thin film. Meanwhile, Group II (Claims 19 to 22 and 27 to 29) was drawn to a method of producing a solar cell.

In line with the basis for restriction, amended Claim 30 is still drawn to a method of producing a solar cell.

Further, incorporating the feature of “rotating a thin film support member having a curved surface”, which was found in Claims 20, 22 and 28, means that amended Claim 30 is also consistent with these claims, which were included with Group II from the restriction requirement in parent application ‘019.

Since present Claim 30 is consistent with both the basis for restriction in parent application ‘019 and the claims in non-elected Group II, present Claim 30 is consonant with the restriction requirement in the parent application.

4. The Examiner is incorrect in contending that the pending claims, namely Claims 19 and 30, are no longer consonant, since his proposed theory that the claims have been amended to “require the primary basis of patentability of the [already patented claims]” finds no basis in either the law or fact.
-

Despite the foregoing, the Advisory Action dated January 14, 2004 maintained the non-obviousness type double patenting rejection of amended Claims 19 and 30. As set forth in the Advisory Action, the only ground for the rejection continues to be that “the independent claims of Group II, the present claims, have been amended to require the primary basis of patentability of Group I (i.e., the limitation of rotating a thin film support member to remove the semi-conductor thin film) (See 804.10(B)).”

For multiple reasons, this rationale rejection is immaterial and not a legitimate basis for maintaining an obviousness-type double patenting rejection.

First, as noted by Federal Circuit Court of Appeals in Texas Instruments Inc. v. U.S. International Trade Commission, 988 F.2d 1165, 26 USPQ2d 1018, (Fed Cir. 1993), “the actual restriction groupings, not the written descriptions thereof, control for purposes of ascertaining if subsequent amendments to original claims are consonant with the substantive restrictions drawn by the Examiner.”³ 26 USPQ2d at 1029.

In Texas Instruments, an examiner’s groupings of the restricted claims were inconsistent with his written description of the groupings. After restriction, the patent applicant added a claim that was inconsistent with the Examiner’s description of his groupings, but fully consistent with the words of the restricted claims. In agreeing with the U.S. International Trade Commission’s findings, the Federal Circuit determined that the post-restriction addition of the claim was fully consonant with the restriction requirement because the additional claim was consonant with the grouping restriction actually imposed by the Examiner and need not be consonant with the Examiner’s written description of the groupings. As set forth in Texas Instruments, the written description of the groupings, like all other factors outside the actual groupings themselves, do not set the line of demarcation. Likewise, in the present situation, the basis of patentability of the Group I claims is also immaterial to the determination of whether the consonance requirement has been met.

In accordance with Texas Instruments, amended Claims 19 and 30 remain consonant with the Restriction Requirement because the feature incorporated into these claims was in the Group II claims at the time of and after restriction in the parent

³/See also Chief Judge Archer’s concurring opinion in Applied Materials Inc. v. Advanced Semiconductor Materials, F.3d 1563, 40 USPQ2d 1481 (Fed. Cir. 1996), (commenting on Texas Instruments: “In that case, the examiner’s groupings of the restricted claims were inconsistent with his written description of the groupings. When validity of the patent resulting from the subsequent divisional application was challenged, we held that actual restriction groupings, and not the written description of the groupings, controlled for purposes of determining whether subsequent amendments resulted in claims consonant with the restriction requirement.” 40 USPQ2d at 1493.).

application; and thus, do not cross the line of demarcation set by the separation of Group I from Group II, as defined by the grouping of the claims.

Nevertheless, in addition to the actual groupings, amended Claims 19 and 30 are also consonant with the reason or basis of the restriction.

As set in the restriction requirement, Group I (Claims 1 to 18 and 23 to 26) was drawn to a method of producing a semiconductor thin film. Meanwhile, Group II (Claims 19 to 22 and 27 to 29) was drawn to a method of producing a solar cell. The claims of Group I and Group II at the time of restriction were differentiated in that Group I was directed to a semiconductor thin film and Group II was directed to a solar cell.

However, the feature of rotating a thin film support member having a curved surface, which allegedly makes up the basis of patentability for the Group I claims, was present in both the Group I claims and Claims 20, 22 and 28 of Group II. Since this feature was present in both Group I and Group II, it does not differentiate or distinguish Group I from Group II. Accordingly, this feature, attributed as the basis of patentability, cannot be relied upon as the line of demarcation because the line of demarcation cannot be found in both Group I and Group II.

Amended Claims 19 and 30 do not cross the line of demarcation because the added feature to these claims, "rotating a thin film support having a curved surface", was present in both Group I and II claims after the Restriction Requirement. As such, the amendments to Claims 19 and 30 did not alter the distinguishing features of Group II. In addition, the solar cell of either amended Claim 19 or 30 is still able to use any semiconductor thin film, in accordance with the written description of the basis of restriction.

Also, the present Examiner is mistaken as to the basis of patentability set forth in the Notice of Allowance dated December 18, 2000. The primary basis of patentability of the Group I claims was not the limitation of “rotating a thin film support member to remove a semi-conductor thin film.” Instead, as explained on page 3 of the Notice of Allowance, the former Examiner’s reasons for allowance were: “The combination of a silicon thin film peeled from a substrate placed on a support member by the rotating of thin film support member with a curved surface is not taught by the located prior art.” (emphasis added).

As shown above, regardless of whether consonance is determined by the groupings of the claims or the basis for restriction, the basis for patentability is of no consequence to this determination since it has no basis in fact or law, and therefore, is not a proper ground of rejection in the present situation.

5. Although the current Examiner contends that the original Examiner of the ‘019 application mistakenly categorized claims when entering the restriction requirement, such that the line of demarcation between the groups was unclear, such a mistake is precisely the kind of mistake against which Appellants are protected by 35 U.S.C. § 121, third sentence.

In a personal Interview conducted by Appellants’ representatives with the Examiner and the Examiner’s Supervisor, Mr. Michael Ball, on July 28, 2003, the foregoing distinctions between the semiconductor of Group I and the solar cell of Group II were discussed. During the discussion, the Supervisor agreed that the Group II contained the following features: 1) the producing of a solar cell that uses a thin film; and 2) forming an electrode on the back of the thin film, which were not present in Group I. The

Supervisor further agreed that this difference established the line of demarcation set in the Restriction Requirement. However, the Supervisor was somewhat concerned with the previous Examiner's selection for the line of demarcation and indicated that there may be errors in the Restriction Requirement. Specifically, now that the Supervisor was aware that both the Group I and Group II claims contained the feature of "rotating a thin film support having a curved surface", the Supervisor raised the issue of whether it would have been more correct to include Claims 20, 22 and 28 in Group I, rather than in Group II.

Commenting on this precise issue, the Board of Patent Appeals and Interferences in Ex parte Nantz, 141 USPQ 523 (Bd. App. 1963), made clear that 35 U.S.C. § 121 was enacted for the express purpose of protecting applicants from mistakes in the restriction process:

"This provision of the third sentence would have meaning only if there has been an error in requiring restriction, since if the inventions between which restriction has been required are patentably different, the provision is not required, as shown by caselaw. Only when there has been an error is it necessary to invoke the provision of the third sentence." 141 USPQ at 528.

The legislative history of 35 U.S.C. § 121 supports the foregoing view in Ex parte Nantz. Regarding the initial draft of the statute, or § 36 of the Proposed Revision and Amendment of Patent Laws, P. J. Federico, an important contributor to the 1952 revision of patent laws, attested:

"The motive for including section 36 in the draft resided in the concern which had been felt over an unfair result which could arise and had arisen from the division practice of the Patent Office. The examiner could require an applicant to divide his application, alleging that the claims were directed to different inventions. Thereafter the two were separated, retaining one set of claims in the first application and filing a second application for the other, and after a patent had issued on the first, the examiner (presumably a different examiner) could reject the claims of the second application on the basis of the claims of the now patented first application, on the ground of so-called 'double patenting.' Also, if this was not done by the examiner

and a second patent issued, it could be held invalid over the first on that ground by a court. *The third sentence of the draft section was included to prevent such results, to protect an applicant or patentee against possible errors of the Patent Office or the possibility of subsequent change of opinions.*” (emphasis added). (Federico Affidavit, Dkt. 53A at CA303).

The present situation is precisely the result that 35 U.S.C. § 121, third sentence, was meant to prevent. In the parent application, a first examiner issued a restriction requirement. After a proper election of the Group I claims, a divisional application directed to the Group II claims was filed. Then, a patent directed to the Group I claims issued. Now, a different examiner rejects amended claims in the divisional application over the claims of a patent that issued from the Group I claims of the parent application. Although agreeing with Appellants that the amendments in question did not alter the distinguishing features of Group II as set by the restriction requirement, the second examiner maintains the rejection largely due to the belief that there are errors in the original restriction requirement.

However, as shown by the legislative intent behind 35 U.S.C. § 121, third sentence, this statute was meant to apply in situations like this one to protect an applicant from restriction requirement errors and from the second-guessing of the actions of a first examiner by a second one to the detriment of the applicant. In this regard, 35 U.S.C. § 121, third sentence, shields the applicant from having to prove the correctness of a restriction requirement in order to nullify an obviousness-type double patenting rejection or preserve the validity of a patent.

Even the USPTO itself recognizes the ramifications of 35 U.S.C. § 121, third sentence, and acknowledges that the responsibility in issuing a proper restriction requirement ultimately lies with the USPTO, and not the applicant:

“This apparent nullification of double patenting as a ground of rejection in such cases imposes a heavy burden on the Office to guard against erroneous requirements for restrictions where the claims define essentially the same invention in different language and which, if acquiesced in, might result in the issuance of several patents for the same invention.” M.P.E.P. § 804.01.

Accordingly, if present, any errors or mistakes in the original restriction requirement are irrelevant and do not bypass the protection afforded by 35 U.S.C. § 121, third sentence.

- II. Even without the protection afforded by 35 U.S.C. § 121, third sentence, amended Claims 19 and 30 would not have been obvious from issued Claims 1, 3, 6 and 7 of the ‘666 patent in view of the Sakaguchi and Hamamoto patents, for the reason that the rejected claims are directed to a solar cell whereas the patented claims are directed to a semiconductor thin film.

Present Claims 19 and 30 are directed to a method for producing a solar cell. Issued Claims 1, 3, 6 and 7 of the parent ‘666 patent are directed to a method for producing a semiconductor thin film. As discussed below, the solar cells of present Claims 19 and 30 are different and distinct from the semiconductor thin films of issued Claims 1, 3, 6 and 7 in the parent ‘666 patent. Accordingly, even without the protection of 35 U.S.C. § 121, third sentence, present Claims 19 and 30 are not obvious from the issued Claims 1, 3, 6 and 7 in the ‘666 patent in view of Sakaguchi and Hamamoto; and therefore, the obviousness-type double patenting rejection cannot be maintained.

- A. In entering the restriction requirement, the Examiner in the '019 parent application explicitly conceded the distinctiveness of thin films used in solar cells and their utility in other devices, such as TFTs, CMOS, etc.

The restriction requirement in the parent application made clear that a semiconductor thin film is distinct from a solar cell. First, the restriction requirement divided the claims into a group directed to a semiconductor thin film and to a separate group directed to a solar cell. Next, the Examiner in the '019 application noted that separate searches are required for the claims in Group I and the claims in Group II.

The restriction requirement also commented that the semiconductor thin film of the Group I claims has a separate utility in that it can be used in other devices other than the solar cell of the Group II claims. For example, the Examiner in parent '019 application contended that the thin films "can be used in numerous other devices line [sic, like] TFTs, CMOS, Etc."

Accordingly, the Examiner in the '019 concluded that the semiconductor thin film of the Group I claims was distinct from the solar cell of the Group II claims.

- B. Because the existence of semiconductor thin films does not necessarily imply the solar cells of the rejected claims, the obviousness-type double patenting rejection is erroneous and must be withdrawn.

The present invention, as defined in amended Claims 19 and 30, is directed to a method of producing a solar cell. According to one feature of the invention, a semiconductor thin film is peeled away by securing an edge of a flexible film extending outwardly from a substrate to a thin film support member having a curved surface, and rotating the thin film support member while the flexible film is kept in contact with the curved surface. Electrodes are then formed on the peeled semiconductor thin film.

Claims 1, 3, 6 and 7 of the '666 parent patent do not mention these features for the reason that these claims are not directed to the production of a solar cell and hence do not disclose or suggest a method of producing a solar cell; rather these claims are directed to a method of producing a semiconductor thin film.

As the foregoing distinction exemplifies, the existence of a method for making a semiconductor thin film does not necessarily imply a method for making a solar cell, such that the obviousness-type double patenting rejection cannot be sustained. Indeed, as explained above, separate searches are required for claims directed to a solar cell and claims directed to a semiconductor thin film. In addition, as noted in the restriction requirement in the parent '019 application, the claims directed to a solar cell are in a different classification than the claims directed to a semiconductor thin film.

As such, in view of the differences and distinctiveness between a solar cell and a semiconductor and between the corresponding methods of production thereof, Claims 1, 3, 6 and 7 of the '666 patent do not provide the requisite motivation to combine the foregoing feature of a curved thin film support member used to carry out peeling with a method for producing a solar cell.

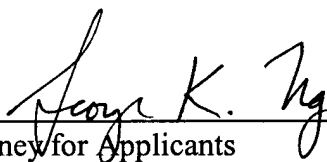
Accordingly, notwithstanding the protection afforded by 35 U.S.C. § 121, third sentence, against the outstanding obviousness-type double patenting rejection, the applied art, whether alone or in combination, is not seen to disclose or suggest the present invention, as recited in Claims 19 and 30.

CONCLUSION

In view of the foregoing, withdrawal of the obviousness-type double patenting rejection is respectfully requested.

Appellant's undersigned attorney may be reached in our Costa Mesa, California office at (714) 540-8700. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,



Attorney for Applicants

Registration No. 54,334

FITZPATRICK, CELLA, HARPER & SCINTO
30 Rockefeller Plaza
New York, New York 10112-2200
Facsimile: (212) 218-2200

APPENDIX A

1 to 18. (Cancelled).

19. (Previously Presented) A method of producing a solar cell, comprising:

the step of forming a separation layer on a substrate and forming a semiconductor thin film having a semiconductor layer of a first conductivity type and a semiconductor layer of a second conductivity type on the separation layer;

the step of bonding a light-transmitting flexible film onto the semiconductor thin film with a light-transmitting adhesive;

the step of securing an edge of the flexible film extending outwardly from the substrate to a thin film support member having a curved surface;

the step of rotating the thin film support member while the flexible film is kept in contact with the curved surface of the thin film support member, thereby peeling the semiconductor thin film away from the substrate; and

the step of forming an electrode on a back surface of the semiconductor thin film thus peeled.

20. (Cancelled).

21. (Previously Presented - Withdrawn) A method of producing a solar cell, comprising:

the step of forming a separation layer on a substrate and forming a semiconductor thin film of a first conductivity type on the separation layer;

the step of bonding a light-transmitting flexible film onto the semiconductor thin film of the first conductivity type with a light-transmitting adhesive;

the step of securing an edge of the flexible film extending outwardly from the substrate to a thin film support member having a curved surface;

the step of rotating the thin film support member while the flexible film is kept in contact with the curved surface of the thin film support member, thereby peeling the semiconductor thin film of the first conductivity type away from the substrate;

the step of forming a semiconductor thin film of a second conductivity type on a back surface of the first semiconductor thin film thus peeled; and

the step of forming an electrode on the semiconductor thin film of the second conductivity type.

22 to 26. (Cancelled).

27. (Previously Presented - Withdrawn) A method of producing a solar cell, comprising:

the step of forming a separation layer on a substrate and forming a semiconductor thin film having a first semiconductor layer of a first conductivity type and a second semiconductor layer of a second conductivity type on the separation layer;

the step of bonding an electroconductive flexible film onto the semiconductor thin film with an electroconductive adhesive;

the step of securing an edge of the flexible film extending outwardly from the substrate to a thin film support member having a curved surface;

the step of rotating the thin film support member while the flexible film is kept in contact with the curved surface of the thin film support member, thereby peeling the semiconductor thin film away from the substrate; and

the step of forming an electrode on a back surface of the semiconductor thin film thus peeled.

28. (Cancelled).

29. (Original - Withdrawn) The method according to Claim 27, wherein the peeling is carried out while holding the electroconductive film by an electromagnet.

30. (Previously Presented) A method of producing a solar cell, comprising:
the step of forming a separation layer on a substrate and forming a semiconductor thin film on the separation layer;

the step of bonding a flexible film onto the semiconductor thin film with an adhesive;

the step of securing an edge of the flexible film extending outwardly from the substrate to a thin film support member having a curved surface;

the step of rotating the thin film support member while the flexible film is kept in contact with the curved surface of the thin film support member, thereby peeling the semiconductor thin film away from the substrate; and the step of forming an electrode, or another semiconductor thin film and an electrode on a back surface of the semiconductor thin film thus peeled.